

AVA-434.3P US.txt
SEQUENCE LISTING

<110> Sizemore, Donata
Tinge, Steven A.
Killeen, Kevin P.

<120> Orally-Administered Live Bacterial Vaccines For Plague

<130> AVA-434.3P US

<140> to be assigned
<141> 2006-06-01

<150> PCT/US2004/041282
<151> 2004-12-09

<150> 60/528,140
<151> 2003-12-09

<150> 60/559,259
<151> 2004-04-02

<150> 60/573,517
<151> 2004-05-22

<150> 60/610,474
<151> 2004-09-16

<160> 14

<170> PatentIn version 3.3

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<212> DNA
<213> Yersinia pestis

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aataaccacc aattcactac aaaagtgatt ggcaaggatt ctagagattt tgatatctct 300
cctaaggtaa acggtgagaa ccttgtgggg gatgacgtcg tcttggctac gggcagccag 360
gatttctttg ttcgctcaat tggttccaaa ggcggtaaac ttgcagcagg taaatacact 420
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<212> PRT
<213> Yersinia pestis

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 35 40 45
 Leu Gly Gly Tyr Lys Thr Gly Thr Thr Ser Thr Ser Val Asn Phe Thr
 50 55 60
 Asp Ala Ala Gly Asp Pro Met Tyr Leu Thr Phe Thr Ser Gln Asp Gly
 65 70 75 80
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 85 90 95
 Phe Asp Ile Ser Pro Lys Val Asn Gly Glu Asn Leu Val Gly Asp Asp
 100 105 110
 Val Val Leu Ala Thr Gly Ser Gln Asp Phe Phe Val Arg Ser Ile Gly
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 aatagagtaa ttactgatga tatcgaattg ctcaagaaaa tcctagctta ttttctaccc 240
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 20 25 30

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 35 40 45

Lys Tyr Asp Pro Arg Lys Asp Ser Glu Val Phe Ala Asn Arg Val Ile
 50 55 60

Thr Asp Asp Ile Glu Leu Leu Lys Lys Ile Leu Ala Tyr Phe Leu Pro
 65 70 75 80

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Gly Ile Lys Arg Val Lys Glu Phe Leu Glu Ser Ser Pro Asn Thr Gln
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Trp Glu Leu Arg Ala Phe Met Ala Val Met His Phe Ser Leu Thr Ala
 115 120 125

Asp Arg Ile Asp Asp Asp Ile Leu Lys Val Ile Val Asp Ser Met Asn
 130 135 140

His His Gly Asp Ala Arg Ser Lys Leu Arg Glu Glu Leu Ala Glu Leu
 145 150 155 160

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Thr Ala Glu Leu Lys Ile Tyr Ser Val Ile Gln Ala Glu Ile Asn Lys
165 170 175

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180 185 190

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195 200 205

Ala Ser Ala Glu Tyr Lys Ile Leu Glu Lys Met Pro Gln Thr Thr Ile
210 215 220

Gln Val Asp Gly Ser Glu Lys Lys Ile Val Ser Ile Lys Asp Phe Leu
225 230 235 240

Gly Ser Glu Asn Lys Arg Thr Gly Ala Leu Gly Asn Leu Lys Asn Ser
245 250 255

Tyr Ser Tyr Asn Lys Asp Asn Asn Glu Leu Ser His Phe Ala Thr Thr
260 265 270

Cys Ser Asp Lys Ser Arg Pro Leu Asn Asp Leu Val Ser Gln Lys Thr
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Thr Gln Leu Ser Asp Ile Thr Ser Arg Phe Asn Ser Ala Ile Glu Ala
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aataaccacc aattcactac aaaagtgatt ggcaaggatt ctagagattt tgatatctct 300
cctaaggtaa acggtgagaa ccttgtgggg gatgacgtcg tcttggctac aggcagccag 360

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ccacaacatt ttattgagga tctagaaaaa	g ttagggtgg aacaacttac tggatcatggt	540
tcttcagttt tagaagaatt ggttcagtta	gtcaaagata aaaatataga tatttccatt	600
aaatatgatc ccagaaaaga ttcggagggt	tttgccaata gagtaattac tgatgatatc	660
gaattgctca agaaaatcct agcttatttt	ctacccgagg atgccattct taaaggcggt	720
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Leu	Gly	Gly	Tyr	Lys	Thr	Gly	Thr	Thr	Ser	Thr	Ser	Val	Asn	Phe	Thr
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 Asn Asn His Gln Phe Thr Thr Lys Val Ile Gly Lys Asp Ser Arg Asp
 85 90 95
 Phe Asp Ile Ser Pro Lys Val Asn Gly Glu Asn Leu Val Gly Asp Asp
 100 105 110
 Val Val Leu Ala Thr Gly Ser Gln Asp Phe Phe Val Arg Ser Ile Gly
 115 120 125
 Ser Lys Gly Gly Lys Leu Ala Ala Gly Lys Tyr Thr Asp Ala Val Thr
 130 135 140
 Val Thr Val Ser Asn Gln Glu Phe Met Ile Arg Ala Tyr Glu Gln Asn
 145 150 155 160
 Pro Gln His Phe Ile Glu Asp Leu Glu Lys Val Arg Val Glu Gln Leu
 165 170 175
 Thr Gly His Gly Ser Ser Val Leu Glu Glu Leu Val Gln Leu Val Lys
 180 185 190
 Asp Lys Asn Ile Asp Ile Ser Ile Lys Tyr Asp Pro Arg Lys Asp Ser
 195 200 205
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 210 215 220
 Lys Ile Leu Ala Tyr Phe Leu Pro Glu Asp Ala Ile Leu Lys Gly Gly
 225 230 235 240
 His Tyr Asp Asn Gln Leu Gln Asn Gly Ile Lys Arg Val Lys Glu Phe
 245 250 255
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 260 265 270
 Val Met His Phe Ser Leu Thr Ala Asp Arg Ile Asp Asp Asp Ile Leu
 275 280 285
 Lys Val Ile Val Asp Ser Met Asn His His Gly Asp Ala Arg Ser Lys
 290 295 300
 Leu Arg Glu Glu Leu Ala Glu Leu Thr Ala Glu Leu Lys Ile Tyr Ser
 305 310 315 320

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Val Ile Gln Ala Glu Ile Asn Lys His Leu Ser Ser Ser Gly Thr Ile
325 330 335

Asn Ile His Asp Lys Ser Ile Asn Leu Met Asp Lys Asn Leu Tyr Gly
340 345 350

Tyr Thr Asp Glu Glu Ile Phe Lys Ala Ser Ala Glu Tyr Lys Ile Leu
355 360 365

Glu Lys Met Pro Gln Thr Thr Ile Gln Val Asp Gly Ser Glu Lys Lys
370 375 380

Ile Val Ser Ile Lys Asp Phe Leu Gly Ser Glu Asn Lys Arg Thr Gly
385 390 395 400

Ala Leu Gly Asn Leu Lys Asn Ser Tyr Ser Tyr Asn Lys Asp Asn Asn
405 410 415

Glu Leu Ser His Phe Ala Thr Thr Cys Ser Asp Lys Ser Arg Pro Leu
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Asn Asp Leu Val Ser Gln Lys Thr Thr Gln Leu Ser Asp Ile Thr Ser
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